

the italicrafters co.

Radio Receiver Model S-77, front view.

ge 2

•

GENERAL SPECIFICATIONS

Tubes Seven plus rectifier

Speaker 5-inch PM

Speaker V.C. Impedance . . 3.2 ohms

Headset Output Low Impedance

Antenna Provision for external antenna

Tuning. Manual

Intermediate Frequency . . 455 kc

AC (using 220 V. ballast tube, R-39)

Power consumption . . . 40 Watts

TUNING RANGE

Band Selector Position	Frequency Range
1.	540 kc - 1680 kc
2.	1680 kc - 5.4 mc
3.	5.3 mc - 15.5 mc
4.	15.5 mc - 44 mc

SERVICE INSTRUCTIONS

RESTRINGING DIAL CORD

To restring the main tuning dial cord, cut a 15-inch length of 30 lb. test dial cord and tie one end to the tension spring of the main tuning capacitor drive pulley at position "1" on the diagram. Follow the numbers "1" through "4", and at position "4" stretch the tension spring and tie the cord securely.

To restring the band spread tuning dial cord cut a 22-inch length of dial cord and follow the procedure as above, starting at position "A" on the diagram. Note that the tuning drive shafts are wrapped with two and a fraction turns of dial cord for proper traction.

REPLACING LAMPS

Refer to Fig. 7 for the location of the two dial lamps used in the receiver. To gain access to defective lamps, reach in through cabinet cover and unclip the dial lamp sockets. The sockets may then be brought out into the open to change the defective lamp. Replace lamps with 6-8 V. G.E. #47 (brown bead) lamps or equivalent.

ALIGNMENT PROCEDURE

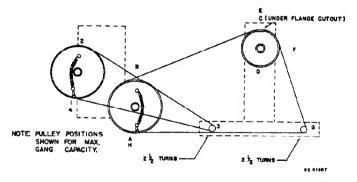
For I-F amplifier alignment it will be necessary to remove the receiver chassis from the cabinet. The chassis is held in the cabinet by three screws along both the bottom edge of the front panel and the rear of the cabinet, and two screws on either side of the front panel.

NOTE - R-F alignment should be accomplished through the holes provided in the cabinet bottom as the oscillator calibration will be effected slightly by changes in the capacity between the cabinet bottom and the r-f coils and wiring.

Before starting the alignment procedure, check the position of the main tuning index marker on the lowfrequency end of the range and set the bandspread dial on zero position. The main tuning condenser should index at max, capacity, and the bandspread condenser at min. capacity.

The standard RMA dummy antenna mentioned in the alignment chart consists of a 200 mmf. condenser in series with a 20 uh r-f choke which is shunted by a 400 mmf. condenser in series with a 400 ohm carbon resistor.

Set the following controls before alignment



SENSITIVITY .	٠	•				•	. Set at maximum
VOLUME			•	•	•		. Set at maximum
AVC switch						•	. Set at OFF
BAND SPREAD		•					. Set at zero
CW/AM			•				. Set at AM (See Step 2)
NOISE LIMITER							. Set at OFF
STANDBY/RECE	IVE	C	•				. Set at RECEIVE

FIG. I. DIAL CABLE STRINGING PROCEDURE

For the settings of the remaining controls, see alignment chart.

TONE SWITCH Set at HIGH

ALIGNMENT CHART

Step	Dummy Antenna	Signal Generator Coupling	Signal Generator Frequency	Band Switch Setting	Receiver Dial Setting	Adjust	Remarks
1	None	Stator plates in center section of tuning gang.	455 kc	**1**	1000 kc	A,B,C, D,E,F	Maximum audio output at speaker voice coil. Use just enough signal generator out- put to obtain a 50 MW signal level.
2	None	See step 1	455 kc (No modulation)	"1"	100 0 kc	G	With the CW/AM switch set at CW, remove the pitch control knob and adjust "G" for zero beat. Replace the knob with the dot on the cent- er position.
3	Std RMA dummy	"A1" on antenna strip. Jumper connected be-	36 mc	'*4 **	36 m^	1,1,1	Maximum output as in step 1.
		tween "A2" and 'G".	18 mc		18 mc	•K,L,M	
4	Std RMA	See step 3	14 mc	''3'	14 mc	•N,O,P	Maximum output as in step 1.
			10 mc		10 mb	*Q,R,S	
5	Std RMA	See step 3	5 mc	''2''	5 me	•T,U,V	Maximum output as in step 1.
	dummy		1.8 mc		1.8 mc	•w	
6	Std RMA	See step 3	1500 kc	"1"	1500 kc	*X,Y,Z	Maximum output as in step 1.
	dummy		600 kc		600 kc	•21	

^{*}Note - Calibration adjustments.

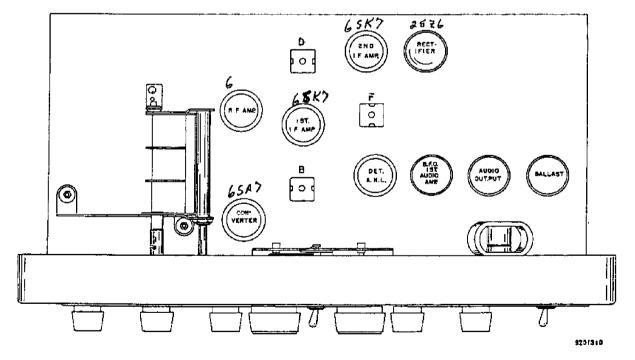
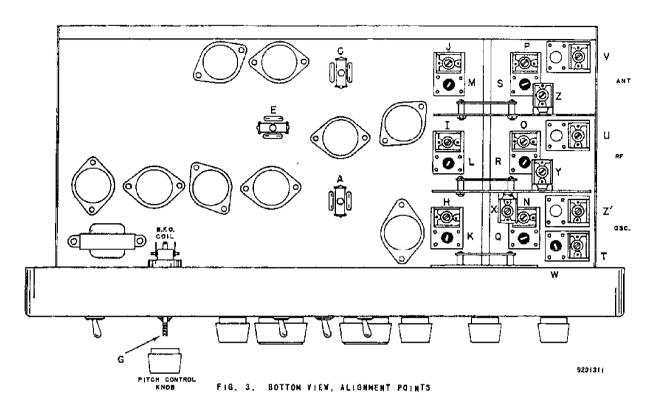
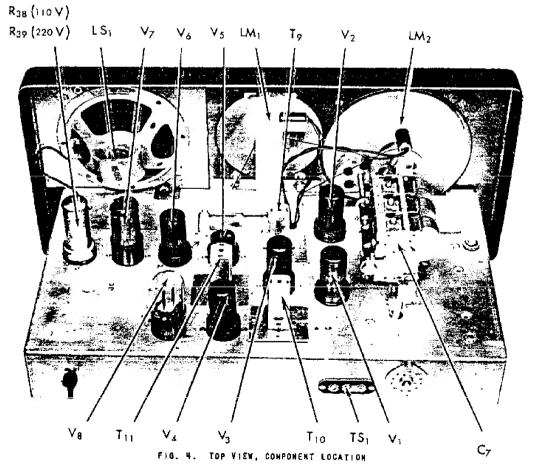
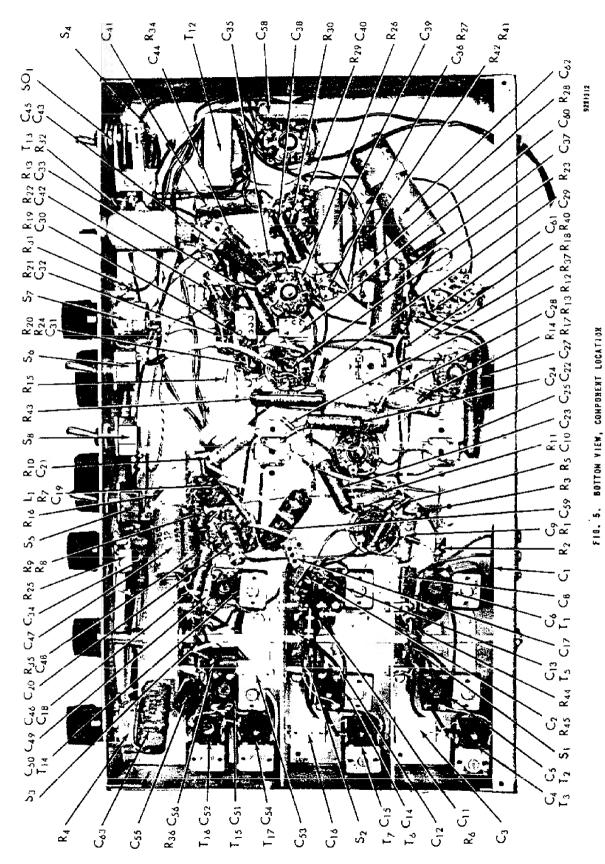


FIG. 2. TOP VIEW, ALIGNMENT POINTS



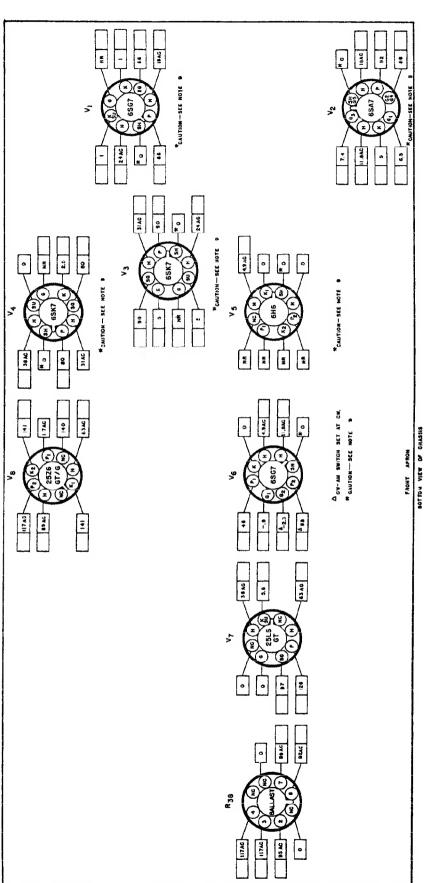


92X | 313



SERVICE PARTS LIST

		Hallicrafters	7.4.4		Hallicrafters
Ref. No.	Description	Part Number	Ref. No.	Description	Part Number
	CAPACITORS			TRANSFORMERS AND COILS	
	1, .01 mfd. 600V., tubular paper	46AZ103J	L-1	Choke, RF	53A138
23,38,43		47X20B101K	T-1 T-2	Coil, antenna; band 4 Coil, antenna; band 3	51B783 51B782
C-2,42,60 C-3,16,53	100 mmf, 500V., mica Trimmer, 2-20 mmf.	44A191	T-3	Coil, antenna; bands 1 and 2	51B1241
C-4	Trimmer (part of coil T-3)		T-5	Coil, RF, band 4	51B787
C-5	Trimmer (part of coil T-2)		T-6	Coil, RF; band 3	51B786
C-6	Trimmer (part of coal T-1)	10en10 B	T-7	Coil, RF: bands 1 and 2	51B1240
C-7	Tuning capacitor, 3 section; ganged 220 mmf. 500V., mica	48C240-B 47X20B221K	T-9.10 T-11	Transformer, 1st and 2nd IF Transformer, IF (detector stage)	50C243 50C242
C-8,17,36, 61	220 mm. Soot., mca	Alvenderin	T-12	Transformer, audio output	55B110
C-11	24 mmf., ceramic	47X25UK240M	T-13	Coil, PITCH CONTROL	54B044
C-12	15 mmf., ceramic	47X21UK150M	T-14	Coil, oscillator, band 4	51B791
C-13	Trimmer (part of coul T-5)		T-15 T-16	Coll, oscillator; band 3	51B913
C-14 C-15	Trimmer (part of colt T-6) Trimmer (part of coll T-7)		T-17	Coil, oscillator; band 2 Coil, oscillator; band 1	51B789 51B912
C-18,44	270 mmf. 500V., mica	47X20B271K		dott, obbittator, batta 1	015016
C-19,40	.005 mfd. 600V., tubular paper	46AZ502J		SWITCHES	
C-20,35	.003 mfd, 600V., tubular paper	46AY302J	c 1	West becaused the	canaco
C-22,25,27,	,02 mfd, 200V., tubular paper	46AU203J	S-1 S-2	Wafer, bandswitch; antenna stage Wafer, bandswitch; RV stage	60B389 62B039
33,34 C-24,28,41	.05 mfd. 600V., tubular paper	46A Y503J	S-3	Wafer, bandswitch; RF stage Wafer, bandswitch; oscillator stage	62B044
C-26,57	2 mmf., wire gimmick	10.2.2.2.2.2	S-4,5,6,8,	Switch, toggle (SPST); STANDBY-	60A138
C-29,30	47 mml. 500V., mica	47X20B470K		RECEIVE, A.V.C., A.N.L., and	
C-31,32,48	.05 mId. 200V., tubular paper	46AU503J		CW-AM	22422
C-37	.1 mfd. 600V., tubular papar	46A ¥104J 45A 121	S-7	Switch, PWR-TONE	60A225
C-39 C-45	10 mfd, 25V., electrolytic 470 mmf, 500V., mica	47X20B471J		PLUGS AND SOCKETS	
C-46	.002 mfd. 600V, tubular paper	46AZ202J		FIGGS AND SOCKES	
C-47	10 mfd. t50V., electrolytic	45A097	PL-1	Line cord and plug	87D1573
C-49 C-50	68 mmf, ceramic	47X25UK680K	SO-1 SO-2	Jack, PHONES	36B004 6A250
C-50	Trimmer (part of coil T-14) Trimmer (part of coil T-15)		30-2	Socket, octal, ballast tube Socket, octal, tube	6A250
C-52	Trimmer (part of coil T-16)			Socket, dial lamp (main tuning dial)	101E38
C-54	Padder (part of coil T-17)			Socket, dial lamp (bandspread dial)	68B068
C-55	1500 mmf, 500V., mica	47X35C152J		TIMES	
C-56 C-58	3000 mmf. 500V., mica .02 mfd. 600V., molded tubular paper	47X35B302K 46BB2031.6		TUBES, RECTIFIERS AND DIAL LAMPS	
C-59	Resonant capacitor (.05 mfd, 600V.)	46A150	V-1	Type 6SG7, RF amplifier	90X6SG7
C-62	60-20-20 mfd. 150V., electrolytic	45B128-C	V-2	Type 6SA7, converter	90X6SA7
C-63	,25 mfd. 200V., tubular papar	46AT2541	V-3,4 V-5	Type 6SK7, 1st and 2nd IF amplifiers	
	hrtis rond		V-6	Typa 6H6, detector and A.N.L. Type 6SC7, audio amp. and B.F.O.	90X6H6 90X6SC7
	RESISTORS		V-7	Typa 25L6GT, audio output	90X25L6GT
R-1	22 ohms 1/2 watt, carbon	23X20X220K	V-8	Type 25Z6GT/G, rectifier	90X25Z6GT/G
R-2,7,20	1 megohm 1/2 watt, carbon	23X20X105M	LM-1,2	Lamp, dial; GE #47	39A004
R-3 R-4	120 ohms 1/2 watt, carbon 10,000 ohms; SENSITIVITY control	23X20X121K 25B590		MCCELL AND ONE	
R-5,10,11,	1000 ohms 1/2 wait, carbun	23X20X102K		MISCELLANEOUS	
14,18,35,	•			Bandswitch and shaft	601192
44	6800 above 1 costs	99790220002		Cabinet (lower section)	66E 359
R-6,45 R-8	6800 ohms 1 watt, carbon 18,000 ohms 1/2 watt, carbon	23X30X682K 23X20X183K		Cabinet front panel Cabinet top	68D160 66D616
R-9	6.8 chms 1/2 watt, carbon	23X20X163K		Dial, bandspread	83B372
R-12,21,28	100,000 ohms 1/2 watt, carbon	23X20X104M		Dial, main tuning	83C240
R-13,17	330 ohms 1/2 watt, carbon	23X20X331K		Dial cord	38A001
R-15,23	2.2 megohms 1/2 watt, carbon	23X20X225M		Foot, rubber	16A007
R-16,30 R-19,34	150 ohms 1/2 watt, carbon 47,000 ohms 1/2 watt, carbon	23X20X151K 23X20X473K		Glass, bandspread tuning dial Glass, main tuning dial	22A307 22B199
R-22,27	330,000 ohms 1/2 watt, carbon	23X20X334M		Knob, BAND SELECTOR	15A266
R-24,20	470,000 chms 1/2 watt, carbon	23X20X474M		Knob, PITCH CONTROL	15A058
R-25 R-26	500,000 ohms; VOLUME control	25B586		Knob, TUNING and BANDSPREAD	15A047
R-26 R-31	19 megohms 1/2 watt, carbon 4700 ohms 1/2 watt, carbon	23X20X106M 23X20X472K		Knob, SENSITIVITY, VOLUME and TONE	15A049
R-32	15 ohms 1 watt, carbon	23X30X150M		Lock, line cord	76A397
R-33	15,000 ohms 1/2 watt, carbon	23X20X153K		Screw, Allen head (6-32 x 3/16)	3A1122
R-36 B-97	10 ohms 1/2 watt, carbon	23X20X100K	F 0-1	Sing, adjustable tuning	77A068
R-37 R-38	270,000 ohms 1/2 wati, carbon Ballast tube (117V.)	23X20X274M 24B875	LS-1	Spaaker, PM; 5 inch Spring, dial cord	85B050
R-39	Ballast tube (220V.)	24B874		Spring, dial cord Spring, retainer	75A012 75A062
R-40	15 ohms 1/2 watt, carbon	23X20X150K	TS-1	Terminal strip, antenna	88A032
R-41	100 ohms 1/2 watt, carbon	23X20X101K		•	
R -42 R -43	1000 ohms 2 watts, carbon 110 ohms 10 watts, WW	23X40X102K			
40	once to settle was	24BG111E			



ŀ	
	CHASSIS
l	ኔ
	VIEW
	BOT FOW
l	_

ELICTRICAL BROWN MASS (AND THE TOASS) WITH ZEAD SIGHAL HOUTE. ELIKE VOLTAGE —IT VAR. AC VOLTAGES WITH ZEAD SIGHAL HOUT. ELIKE VOLTAGE —IT VAR. AC VOLTAGES WITH ZEAD SIGHAL HOUT. ELIKE VOLTAGES SHOWN VERE MEASURED WITH AN ELECTRONIC VOLTAGES WITH OFFICIALS SHOWN VERE MEASURED WITH AN ELECTRONIC VOLTAGES SHOWN VERE MEASURED WITH AN ELECTRONIC VOLTAGES. E. HOLLING COMMECTION, (VOLTAGES SHOWN FOR THE TERMINAL ONLY WITH TERMINAL IS USED AS A TIE LUGG. T. HYLLING READABLE INFADING ORDERALLY MEANINGLESS). E. THE TABLES THE WITH LIME THE DOLLARS AROUND FOR THE MEANINGLESS. ALL READABLE WITH LIME THE DOLLARS AROUNDED.	ALL VOLTAGES AND HEADINGD BETWEEN THOSE SOCKET FERMINALS AND THE ELECTRICIAL ABOUND BASE (AND CARSES) WITH ZERO SIDAR MPTAT LINE VOLTAGE—INT VAR. AC VOLTAGES WILL AS DO VOLTAGES WHEN OPERATIVE FROM A DO SOUNGE. ALL VOLTAGES SHOWN AND ENCROPING THE AS ELECTRONIC VOLTAGES. DO VOLTAGES SHOWN WERE MEASURED WITH AN ELECTRONIC VOLTAGES. TO ALL VOLTAGE SHOWN WERE MEASURED WITH AN ELECTRONIC VOLTAGE. TO ALL VOLTAGE SHOWN WERE MEASURED SHOWN FOR THIS TERMINAL ONLY WHEN TERMINAL IS USED AS A TIE LUGS. TO FALLAGE THE ADDRESS SHOWN GENERALLY MEASURED SHOWN SHOWN SHOWN THE MEASURE SHOWN SHOW SHOWN SHOWN SHOWN SHOW SHOWN SHOWN SHOWN SHOWN SHOWN SHOWN SHOW SHOWN SHOWN SHOWN SHOWN SHOWN SHOWN SHOWN SHOWN SHOW SHOW SHOW S		COUNCY VIEWS AND 2011UM VIEWS.	2	1	2	Ē																
VOLTAGE—BROWNO BUSS (NOT CARASAS) WITH ZEROS SHAMA, MUNT. VOLTAGE SHOWN ARE DC UNLESS OTHERWISE SPECIFIED. VOLTAGE SHOWN ARE DECEMBERED. VOLTAGE SHOWN ARE BROWN FOR THE TERMINAL ONLY TERMINAL IS USED AS A TIE LUES) —NOT READLASE (READING SHOWN FOR THE READINGS). —NOT READLASE WITH LIME FILE DOLLARS ABOUNDED. ENTIRE THE GHASS SHOWN AS SHOW AS SHOWN AS SHOW AS SHOWN AS SHOWN AS SHOWN AS SHOW AS SHOWN AS SHOW AS SHOWN AS SHOW AS SHOWN AS SHOWN AS SHOW AS SHOWN AS SHOWN AS SHOW AS SHOWN AS SHOWN AS SHOWN AS SHOWN AS	VOLTAGE—INTO MASS (NOT CAASSS) WITH ZERD SIGHAL, MPTT, VOLTAGE—INT A AC. AC VOLTAGES WITH ZERD SIGHAL, MPTT, VOLTAGES SHOWN ARE DC UNLESS OTHERWISE SPECIARD. VOLTAGES SHOWN ARE DC UNLESS OTHERWISE SPECIARD. VOLTAGES SHOWN ARE DC UNLESS OTHERWISE SPECIARD. ———————————————————————————————————	_	Ž	=	ARE	MEASU	8	3	11334	Ž	8	Ä	167	NA.S	Y	Ξ							
*** VOLTAGE —117 V AG. AC VOLTAGE WILL BE DO VOLTAGES WHEN GPEATING FROM A D3 SOURGE. *****VOLTAGES SHOWN ARE DC UNLESS OFFENINES SPECFFER. ************************************	** VOLTAGE—ITY N.E. AC VOLTAGES WILL BE DO VOLTAGES WHEN OPERATURE FROM A DO SOUNCE. VOLTAGES SHOWN MEE DECAMBLE WITH AN ELECTROMIC VOLTAGES. ***	4	CTRICAL	3	Q RAO	133	3	5	4A8S/8	THE C	2	8	SIBNA	T N	5								
VOLTAGES SHOWN AND DO UNLESS OTHERWISE SPECPED. VOLTAGES SHOWN WERE MEASURED WITH AN ELECTRONIO VOLTHETER. LAD COMMENDED, VOLTAGE SHOWN FOR THIS TERMINAL ONLY WHEN TERMINAL IS USED AS A TIT LUGS. LAD READABLE (READING GENERALLY MEABURESS). THE TRANSPORTER WITH LINE PLANSPORTER. TERMINS THE WITH LINE PLANSPORTER. TERMINS THE CHARGE WITH LINE PLANSPORTER. TERMINAL WITH THE CHARGE SHOUNDED.	VOLTAGES SHOWN ARE DC UNLESS OTHERWISE SPECPED. VOLTAGES SHOWN WERE MEADURED WITH AN ELECTRONIC VOLTACTER. Labo connection, voltage shown for The Tenninal ONLY WHEN TENNINAL 15 USED AS A TIE LUGS). Labor readable (reading defendaty Meaningless). The readable (reading defendaty Meaningless). Labor Readable (reading defendaty UNE PLUP POLANTED SO THAT GRUND BUSS AND CHASSIS ARE AT SAME TENTAL WITH THE CHASSO GROUNDED.	₩.	. VOL 1	9	Ę	Y Y	¥	š	A0E9	Ĭ	ä	2	OCT O	2	E E	2	1140	F304	⋖	2	ŝ	3	
VOLTAGES SHOWN WERE MEASURED WITH AN ELECTRING VOLTAGETER. VOLTAGES SHOWN FOR THE STEAL TERMINAL ONLY WREN TERMINAL IS USED AS A TIE LUGS) "I, NOT RELABELE TRANSCE GEREBLALY MEASURESS." WATER PROVICED FOR SERVICE METER READINGS. THE RADIOS THESE WITH LIFE FULL POLLARIZED SO THAT GROUND BUSS AND CHARSES ARE AT SAME THIN THE CHARSES SHOUNDED.	VOLTACES SHOWN WERE MEANARD WITH AN ELECTRONIC VALIMETER.		VOLTA	83	SHOW	¥	2	Š	LE88	A T	BW S	-	ECIFIED	,									
**************************************	"L'IND FORBORNE, VOLTAGE BROWN FOR THEN TERMINAL OWLY WHEN TERMINAL IS USED AS A TIE LUS). "L'IND FORBORNE (READING GONERALM, WITH LINE THUS FABRES). I READINGS TAKEL WITH LINE PLUE FOLKARIZED SO THAT GROUND BUSS AND CHASSIS ANE AT SAME VIEWTHAL WITH THE CHASSE BROUNDED.		VOLTAG	2	HOWN	WEN	ĭ	EASU	9	Ě	3	LEGY	RONIC	202	METE	_							
**_MOT READABLE (READING GENERALLY MEANINGLESS),	**_MOT READABLE (READING OENERALLY MEANHOLESS),		3 ON	Š	CT60	Š	LIABE	#	NWO.	Š	1	TEA	MIRAL	ORLY	WHE	1	RMIMAL	2	SE	3	<	71	9
SPACE PROVINCE FOR SERVICE METER READINGS. L READINGS TAKEN WITH LINE PLUE POLARIZED SO THAT GROUND BUSS AND CHASSIS ARE AT SAME VERTILL WITH THE CHASSE AROUNDED.	MAD AND PROVIDED FOR SERVICE METER READINGS. I. READINGS TAKEN WITH LINE PLUS POLARIZED SO THAT GROUND BUSS AND CHASSIS ARE AT SAME STEATIAL WITH THE GHASSS BROUNDED.		TON	3	ABLE	REAC	S K	96 M	RALL	N.	AMB GI	LE 3 5 3	_										
L. READINGS TAKE4 WITH LINE PLUG POLARIZED SO THAT GROUND BUSS AND CHASSIS ARE AT SAME Systemial with the chassa grounded.	L. READINGS TAKEN WITH LINE PLUS POLARIZED SO THAT GROUND BUSS AND CHASSIS ARE AT SAME OTERTIAL WITH THE CHASSS RROUNDED.		Ň	30	Ē	A10EB	Ş	8 M	200	3E 3E	#	NO.											
DYENTIAL WITH THE CHASSS GROUNDED.	OTENTIAL WITH THE CHASSS GROUNDED.		IL READ	MG3	TAK	¥ 10	H	¥	1	Š	AREZE	*	THA	8	9	8178	3	CHASS	8	ఱ	¥	34.8	
			TENTIAL	Ē	=	ă	1A88.	3	CHOOL	ë													

D20 | 309

SETTING
FULL PLOCKWISE
BAND 4
ON
AM
OFF
RECEIVE

CONTROL
SENSITIVITY
SAND SELECTOR
AVG
CU/AM
HOISE LIMITER
STANDBY/REGEIVE

FIG. 6. TUBE SOCKET VOLTAGE CHART

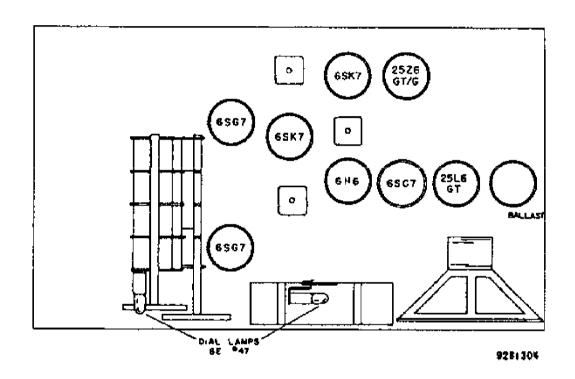
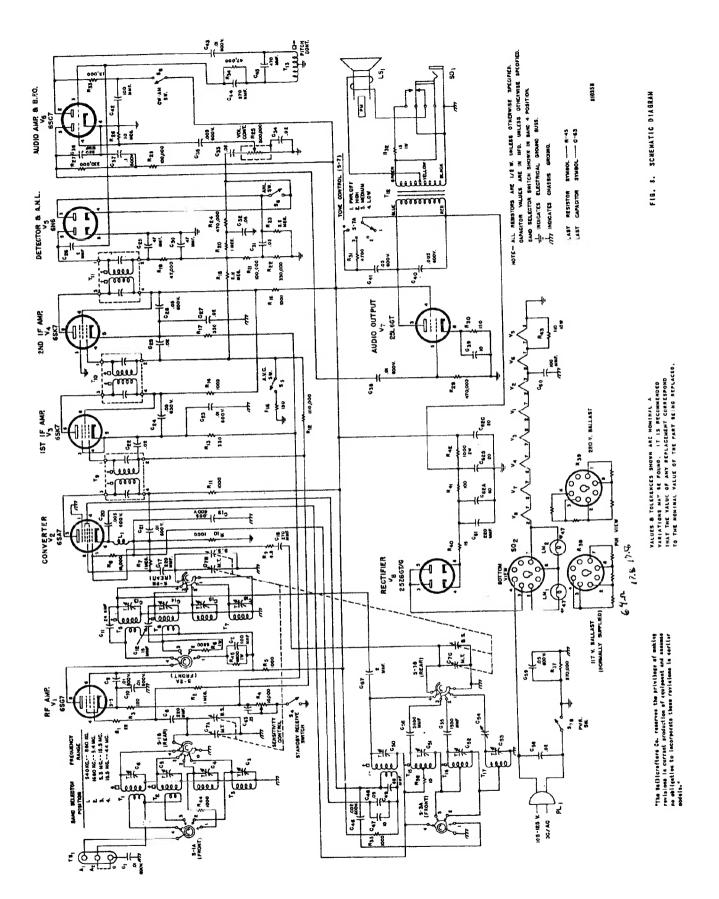
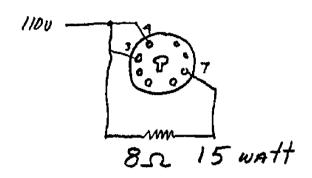


FIG. 7. TOP VIEW, LOCATION OF TUBES AND DIAL LAMPS



Replacement ckt

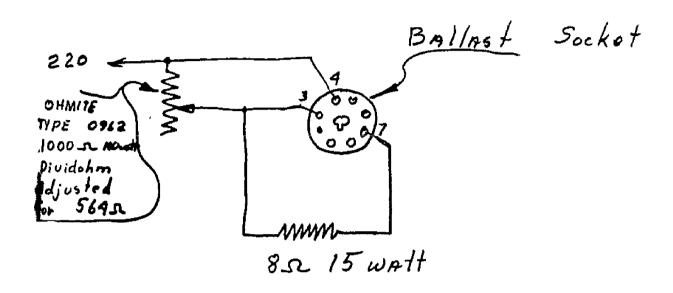
1100 BALLAST



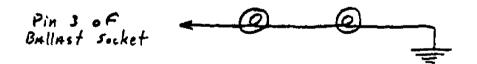
Rewire Panel Lamps.



Replace Bulbs with "Chicago Miniature
TYPE 1835 (55 volt @ .05 A) or Similar



Rewire Panel Lamps



Replace Bulbs with "Chicago Miniature"

TYPE 1835 (55 volt @ .05A) or similar